TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NUMBER 1000044
CHEMICAL LIME COMPANY - DOUGLAS LIME PLANT

NOMENCLATURE

IP *Installation Permit*
NAA *Non Attainment Area*
NO_x *Nitrogen Oxides*
NSR *New Source Review*
OP *Operating Permit*
PM *Particulate Matter*
PM_{10} *Particulate Matter less than 10 microns in diameter*
PSD *Prevention of Significant Deterioration*
PTE *Potential to Emit*
PSSIP *Paul Spur PM_{10} State Implementation Plan, Prepared by Office of Air Quality, Arizona Department of Environmental Quality(ADEQ), dated July 1990. This document can be obtained by contacting ADEQ at 602-207-2316.*
SO_2 *Sulfur Dioxide*

I. INTRODUCTION

This permit is the Title V permit renewal for the operation of a Lime Plant near Douglas, Arizona. This is a renewal for Air Quality Permit 0368-93.

A. Company Information

Mailing Address: 4753 W. Paul Spur Road, Douglas, Arizona 85607

Facility Address: 4753 W. Paul Spur Road, Douglas, Arizona (at Paul Spur, approximately 10 miles west of Douglas)

B. Attainment Classification

The Paul Spur area is designated as Non-Attainment for SO_2 and PM_{10}.

II. PROCESS DESCRIPTION

This facility manufactures lime from limestone. The limestone processing plant consists of a quarry and a crushing and screening plant. This part of the process produces crushed and sized limestone for the lime manufacturing operation and for other local uses. The lime manufacturing operation consists of three kilns and a number of other pieces of equipment for handling limestone, solid fuel and kiln lime product. A detailed description of the various processes and activities at the facility has been provided in the Class I permit application for this facility, dated November 1, 1994. A copy of this application can be obtained by contacting the Air Quality Division of the Arizona Department of Environmental Quality at 602-207-2316 (or in-state toll free at 1-800-234-5677 x2316). In addition, Attachment E of the permit contains schematics that chart out the flow of materials through various processes starting from quarrying the limestone and ending with shipping out the lime kiln product.

III. EMISSIONS

The potential rates of the following pollutants are greater than 100 tons per year : (i) particulate matter, (ii) particulate matter with aerodynamic diameter less than 10 microns, (iii) sulfur dioxide, (iv) nitrogen oxides, and (v) carbon monoxide. Detailed emissions calculation methodologies have been provided in Section 4 of the Class I permit application dated November 1, 1994 (and revised on April 9, 1999). A copy of this application can be obtained by contacting the Air Quality Division of the Arizona Department of Environmental Quality at 602-207-2316 (or in-state toll free at 1-800-234-5677 x2316). In addition actual emissions as provided in annual emission inventory reports can be obtained by contacting the Air Quality Division of the Arizona Department of Environmental Quality at 602-207-2273 (or in-state toll free at 1-800-234-5677 x2273).

IV. APPLICABLE REGULATIONS

TABLE 1 : LISTING OF APPLICABLE REQUIREMENTS

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Limestone Processing Plant : Primary Crusher/DC 146 Secondary Crusher/DC147 Secondary Screen /DC 148	AAC R18-2-702(B), AAC R18-2-720(B)	These equipment process limestone. They were all manufactured prior to August 31, 1983 (trigger date for NSPS Subpart OOO). Therefore, they are subject to Article 7 standards.
Primary Screen/ Enclosed #1 Secondary Screen / Enclosed #2 Secondary Screen / Enclosed #3 Secondary Screen / Enclosed	AAC R18-2-702(B), PSSIP 6.4	These equipment process limestone. The secondary screens were all manufactured prior to August 31, 1983. Therefore, they are subject to AAC R 18-2-702(B). PSSIP 6.4 requires all screens to be enclosed.
Open Areas, Roadways/Streets, Material Handling, Storage Piles	AAC R18-2-604, AAC R18-2-605, AAC R18-2-606, AAC R18-2-607, AAC R18-2-612 PSSIP 6.1/Permit 0368-93 Attachment A Condition X(C)(1) PSSIP 6.3/Permit 0368-93 Attachment A Condition X(C)(2) PSSIP 6.6, 6.7, 6.8/Permit 0368-93 Attachment A Condition X(G), X(H) Installation Permit 1233, Attachment B Condition II(B)(2)	All of these operations are non-point sources, and are subject to the requirements of Article 6. PSSIP 6.1 is applicable to conveyor belt transfer points. PSSIP 6.3 is applicable to stackers/reclaimers at storage piles. PSSIP 6.6, 6.7, 6.8 are applicable to Cleared Areas, and Travel on Unpaved Roads. The installation permit condition is an opacity standard of 10% applicable to belt conveyors, bucket elevators, and storage silos.

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Solid Fuel Handling System : #4 Fuel Bin, #4 Solid Fuel Mill#	AAC R18-2-702(B), AAC R18-2-716(B) PSSIP 6.1	These units were built after October 24, 1974. However, they cannot process more than 200 tons per day of solid fuel. Therefore, they are not subject to NSPS Subpart Y. PSSIP 6.1 is applicable to conveyor belt transfer points.
Railcar Unloading, Hoppers, Feeders, Conveyors, Crusher, #5 Fuel Bins, #5 Solid Fuel Mills	40 CFR §60.252, §60.254 PSSIP 6.1	These emission units were built afer October 24, 1974, and can process more than 200 tons per day of solid fuel. Therefore, they are subject to NSPS Subpart Y. PSSIP 6.1 is applicable to conveyor belt transfer points.
Kiln 4 System : Kiln 4 Preheater Screen/Enclosure/Spray Bars	AAC R18-2-702(B), PSSIP 6.4	The Preheater Screen was installed in 1967, which is prior to the NSPS Subpart OOO trigger date of August 31, 1983.
Kiln 4 / Controlled by Cyclone and Gravel Bed Filter DC 400	AAC R18-2-720(B), AAC R18-2-720(F), AAC R18-2-702(B), PSSIP 6.5, Permit 0368-93/Attachment A Condition X(A)(1) Use natural gas, coal, coke, fuel oil, combinations	Kiln 4 was installed in 1967, which is before the NSPS Subpart HH trigger date of May 3, 1977. Therefore, the kiln is an existing facility. PSSIP 6.5 requires the installation of a dust transfer and storage system for the existing Kiln 4 Dust Collector. The condition from Permit 0368-93 prescribes a five percent opacity limit on damper seal operations.
Kiln 4 Pug Mill	AAC R18-2-702(B)	-
BC 403/DC 403	AAC R18-2-702(B), AAC R18-2-730(A)	This is an unclassified existing sources.
Dust Bin BN-01 / DC 426 Drop Point into Truck	Installation Permit 1233 Att A III, Att B II(A), II(B)(1), III(B), Att C	-

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Kiln 5 System : Kiln 5 Scalping Screen/Enclosure	40 CFR §60.672, §60.675 PSSIP 6.4	The Scalping Screen was installed in 1995. The capacity of the screen is 100tph. The screen is an affected facility as defined by 40 CFR §60.670. PSSIP 6.4 is applicable to all screens.
Kiln 5 / Controlled by Baghouse DC 500	AAC R18-2-720(B), AAC R18-2-720(F), AAC R18-2-702(B) Use natural gas, coal, coke, fuel oil, on-specification used oil (at a rate <= 20 gallons per hour), and combinations as fuel Permit 0368-93/Att A IX(B), X(A)(1), X(A)(2) Installation Permit 1233 Att B IV(1) PSSIP 6.4 PSSIP 6.5	Kiln 5 was installed in 1970, which is before the NSPS Subpart HH trigger date of May 3, 1977. Therefore, the kiln is an existing facility. Kiln 5 damper seals < 5% opacity PSSIP 6.5 is applicable to the dust transfer and storage system for Kiln 5 Baghouse.
Kiln 5 Product Cooler	AAC R18-2-702(B)	
Reject Belt/DC 522, BC 404/DC 523, Kiln 5 Dust Bin/ DC 524, and T-410 Bin/DC 508	AAC R18-2-702(B), AAC R18-2-730(A) Permit 1001154	These are unclassified existing sources.
Kiln 5 Pug Mill	AAC R18-2-702(B), Installation Permit 1233 Att A III, Att B III(A)	-
Kilns 4 and 5 Lime Handling System : Rotary Lime Crusher R-405/DC 402, Bin 401/DC401, Bin 402 & Screw 434/DC402, Bin 403&Bin 405/DC406, BC 483/DC482, Spout 483/DC483, BC 486/DC486, Spout 486/DC487, BC 433/DC 431	AAC R18-2-702(B), AAC R18-2-730(A), Installation Permit 031208, Permit 1000376, Installation Permit 1222	The crusher operates on lime. NSPS Subpart OOO AAC R18-2-720, and AAC R18-2-722 are applicable only to crushers that operate on limestone.
Rotary Lime Crusher R-451/Sealed Control, Hammermill R-452/Sealed Control, Bin 406/Enclosures & Seals, Spout 403 and Drop Points into Trucks from Bins 401, 402, 403, 404, 405, 406, 407 - Use Loading Sleeves/Enclosures	AAC R18-2-702(B)	The crusher and hammermill operate on lime. NSPS Subpart OOO AAC R18-2-720, and AAC R18-2-722 are applicable only to crushers that operate on limestone.

EMISSION UNITS	APPLICABLE REQUIREMENTS	COMMENTS
Kiln 6 System :		
Kiln 6 Stone Screen and Stone Bin/ Enclosures/DC 774	AAC R18-2-702(B), AAC R18-2-722(B) PSSIP 6.4	The Preheater Screen was installed in 1980. This is prior to the NSPS Subpart OOO trigger date of August 31, 1983. Therefore, it is an existing facility subject to AAC R18-2-722. PSSIP 6.4 is applicable to screens.
Kiln 6 / Controlled by Wet Scrubber DC 600	AAC R18-2-720(B), AAC R18-2-720(F), AAC R18-2-702(B) Use natural gas or fuel oil as fuel EPA Installation Permit issued on August 31, 1978, Condition VIII(B) Installation Permit 1208 Permit 0368-93 Att A IX(B), X(A)(1) PSSIP 6.4	Kiln 6 is a vertical kiln - therefore, it is not subject to NSPS Subpart HH which is applicable only to rotary kilns. AAC R18-2-720 is applicable to vertical kilns. This contains a limit on the particulate emission rate. Requires installation of continuous pressure drop and water flow monitors.
Kiln 6 Lime Crusher / DC 776	AAC R18-2-702(B), AAC R18-2-730(A)	The crusher operates on lime. NSPS Subpart OOO AAC R18-2-720, and AAC R18-2-722 are applicable only to crushers that operate on limestone.
Kiln Discharge, Reject Conveyor & Product Conveyor/DC775&DC776, Large Bin&Kiln 6 Lime Screen/DC777, Truck Loadout/DC778, Dust Blend System Rail Loadout/DC779, Dust Blend System Truck Loadout/DC 780, Dust Blend Bin/DC 730	AAC R18-2-702(B), AAC R18-2-730(A), PSSIP 6.4 Permit 1001154	These are unclassified existing sources. PSSIP 6.4 requires all screens to be enclosed.
Miscellaneous Drop Points	AAC R18-2-702(B)	These are existing sources subject to Article 7.

V. COMPLIANCE HISTORY

Compliance history of the source has been reviewed, and no additional conditions were found as a direct result of an enforcement action, that need to be incorporated into the permit as applicable requirements.

VI. PREVIOUS PERMITS AND CONDITIONS

TABLE 2 : LISTING OF PREVIOUS PERMITS

Date Permit Issued	Permit #	Application Basis
August 24, 2001	1001605 *(Appendix 1)*	Minor revision to 0368-93
February 3, 2000	1001154 *(Appendix 2)*	Minor revision to 0368-93
March 6, 1998	1000376 *(Appendix 3)*	Minor revision to 0368-93
Draft	M031347P2-99 *(Appendix 4)*	Unissued Operating Permit for whole facility
Jun 23, 1993	0368-93 *(Appendix 5)*	Operating Permit for entire facility
May 5, 1993	031208 *(Appendix 6)*	Installation Permit for dust collectors on lime handling equipment
December 2, 1991	1233 *(Appendix 7)*	Installation Permit for miscellaneous equipment and dust collectors
u/a	1222 *(Appendix 8)*	Installation Permit for miscellaneous equipment and dust collectors
September 1, 1988	1208 *(Appendix 9)*	Installation Permit for Wet Scrubber Replacement
August 31, 1978	EPA Permit *(Appendix 10)*	Installation Permit for Vertical Kiln and Wet Scrubber
u/a	1201 *(Appendix 11)*	Installation Permit - Modifications to Kiln 5 Dust Collection System

u/a : Unavailable

TABLE 3 : PREVIOUS PERMIT CONDITIONS

Permit 1001605	**Permit #1000044**
I	Part VII(A)
Permit 1001154	**Permit #1000044**
Att B, Condition I	Paragraphs VI(D)(1) and VIII(C)(1) of Attachment B
Att B, Condition II	Paragraph VI(D)(2) and Sub-Paragraph VIII(C)(2)(g) of Attachment B. Generic references to "manufacturer's specifications" are un-enforceable. Proper operation of the equipment is better monitored through the use of the periodic monitoring approach prescribed in Paragraphs VI(D)(3) and VIII(C)(3) of Attachment B.
Permit 1000376	**Permit #1000044**
Att A, Condition X	Section VII of Attachment B
Permit 0368-93	**Permit #1000044**
Att A, Condition I	Part II(A) of Attachment A, Sections II through VIII
Att A, Condition II	Section XII of Attachment A
Att A, Condition III	Section IX of Attachment A

Att A, Condition IV	Rules governing Permit Transfers are in AAC R18-2-325. These rules are applicable to the Permittee, even though they are not explicitly reproduced in Permit 1000044.
Att A, Condition V	Section IV of Attachment A
Att A, Condition VI	Section III of Attachment A
Att A, Condition VII	Section II of Attachment A
Att A, Condition VIII	Section I of Attachment A
Att A, Condition IX(A)	Sub-Paragraphs II(A)(3)(b), V(B)(3)(e), VI(B)(3)(e), and VIII(B)(3)(f) of Attachment B
Att A, Condition IX(B)	Paragraph I(B)(2), Sub-Paragraphs V(B)(3)(f), VI(B)(3)(f), VIII(B)(3)(g) of Attachment B
Att A, Condition IX(C)	This condition is no longer relevant, and as such, has not been carried over into Permit 1000044.
Att A, Condition X(A)(1)	Sub-Paragraphs V(B)(1)(c), VIII(B)(1)(e) of Attachment B. The bypass for Kiln 5 has been discontinued.
Att A, Condition X(A)(2)	Sub-Paragraphs V(B)(2)(c), VIII(B)(2)(d) of Attachment B. The bypass for Kiln 5 has been discontinued.
Att A, Condition X(B)	The COMS are currently operational. The COMS requirements are in Paragraphs V(B)(3) and VI(B)(3) of Attachment B.
Att A, Condition X(C)	Sub-Paragraphs III(A)(3)(a) and III(A)(3)(b)
Att A, Condition X(D) and X(E)	These requirements have been completed and incorporated into Sections V, VI, and VII of Attachment B.
Att A, Condition X(F)	Paragraphs II(B)(2), II(C)(2), V(A)(2), VI(A)(2), VIII(A)(2) of Attachment B
Att A, Conditions X(G), X(H)	Paragraph III(A)(3) of Attachment B. The requirement to maintain surface deposit depth to lesser than or equal to 1/32 inch has been substituted by an extensive housekeeping plan referenced in Sub-Paragraph III(A)(3)(h). The housekeeping plan was derived in 1993 in collaboration with ADEQ. Appendix 12 of the Technical Support Document contains relevant correspondence with ADEQ. The requirement for conductivity and silt testing was also discontinued following ADEQ consent. A document relevant to this issue has been included in Appendix 12.
Att A, Condition X(I)	Paragraphs V(B)(4), VI(B)(4), VIII(B)(4) of Attachment B have annual testing requirements for the kilns
Att A, Condition X(J)	Part I(F) of Attachment B
Att A, Condition X(K)	Part II(A) of Attachment A

Att A, Condition X(L)	PM Limits The PM limits for Kiln 4 and 5 are derived from the process weight rate equation (AAC R18-2-720(D)), which has been included in the relevant sections in Attachment B. The process weight rate equation is an emission standard that changes in proportion to the process weight rate of the kilns. The fixed limits in Operating Permit 0368-93 were derived from performance tests at a single process weight rate, and therefore, do not accurately represent the underlying applicable requirement. Therefore the fixed limits are not included in the Permit 1000044. The PM limit for Kiln 6 is derived from the relevant installation permit which was based on a PSD analysis, and has been retained in Sub-Paragraph VIII(B)(1)(d) of Attachment B. The Crushing Plant refers to two crushers and a screen at the limestone quarry. All of these pieces of equipment have been in operation for many years, and are considered to be "grandfathered" sources as far as the NSR and NSPS regulations go. There are no records with ADEQ of modifications to these pieces of equipment. In addition, 0368-93 is an *operating* permit - modifications to existing equipment, or new equipment would have had to get an *installation* permit. Therefore, based on available information, it is safe to conclude that the PM limit of 58.3 lb/hr was not based on an underlying PSD/NAA analysis. Removal of this limit will is not a relaxation for purposes of PSD. This limit was also not derived from the PSSIP. As a review of Section 6 (Selected Control Strategies for the Paul Spur Area) of the PSSIP indicates, such a limit was never included as a control measure. Based on the these considerations, this limit has not been carried over into Permit 1000044. The applicable SIP regulation (the process weight rate equation) has been included in Part II(A) of Attachment B of the permit. NOx, SO_2, and CO There are no existing applicable requirements for these pollutants. As indicated by the technical review document accompanying Permit 0368-93, these limits were calculated based on AP-42 emission factors. There are no records of any attempted "major modifications" to the kilns, and as such there are no indications that these limits were put in place as a result of a PSD/NAA review for these pollutants. Therefore, these limits have not been carried over into Permit 1000044. Removing these limits will not constitute a relaxation for purposes of PSD.
Installation Permit #031208	**Permit #1000044**
The equipment covered by this permit are no longer operational, therefore, the conditions are no longer valid.	
Installation Permit 1233	**Permit #1000044**
Att A, Condition I	This condition is redundant and has not been carried over into Permit 1000044.
Att A, Condition II	This condition is no longer relevant and has not been carried over into Permit 1000044.
Att A, Condition III	Paragraph V(C)(2), Paragraph V(E)(2), Paragraph VI(E)(2) of Attachment B
Att A, Condition IV	Section XII of Attachment A
Att A, Condition V	Section IX of Attachment A
Att A, Condition VI	Rules governing Permit Transfers are in AAC R18-2-325. These rules are applicable to the Permittee, even though they are not explicitly reproduced in Permit 1000044.
Att A, Condition VII	Section XXI of Attachment A
Att A, Condition VIII	Part II(A) of Attachment A
Att A, Condition IX	Sections II, XVII, XVIII of Attachment A

Att A, Condition X	These numeric emission limits are not based on an applicable requirement. Therefore, they have not been carried over into Permit 1000044
Att A, Condition XI	This condition is no longer relevant and as such, has not been carried over into Permit 1000044.
Att B, Condition I	Parts V(C), VI(E) of Attachment B
Att B, Conditions II(A), II(B)	When the Installation Permit was issued, AAC R18-2-801.58 was mistakenly identified as an applicable requirement. These conditions have been deleted, except for II(B)(2), which has been placed in V(D)(1)(c) of Attachment B.
Att B, Condition II(C)	As indicated by the technical review document accompanying Installation Permit 1233, these limits have been derived from AP-42 emission factors. The equipment covered by the installation permit was installed to reduce PM emissions as required by PSSIP. Section 6.5 of the PSSIP requires the installation of equipment to better control the dust transfer and storage systems associated with Kilns 4 and 5 Dust Collectors. However, Section 6.5 does not contain the numeric limits in question. The numeric limits also were not designed to avoid triggering PSD/NAA review. These numeric emission limits are not based on an applicable requirement and therefore, they have not been carried over into Permit 1000044
Att B, Condition II(D)	Section XII of Attachment A
Att B, Condition III(A)	Part V(C), Part VI(E) of Attachment B
Att B, Condition III(B)	Paragraph V(E)(2) of Attachment B
Att B, Condition IV(1)	Sub-Paragraph V(B)(3)(d), Sub-Paragraph VI(B)(3)(d) of Attachment B
Att B, Condition IV(2)	This condition is not an on-going requirement, and as such, has not been carried over into Permit 1000044.
Installation Permit #1222	**Permit #1000044**
Att A Condition I	Paragraph VII(A)(1) of Attachment B
Att A Condition II, III	Sub-Paragraph III(A)(2)(d) of Attachment B
Att A Condition IV	This condition has not been carried over into Permit 1000044 because generic references to “manufacturer’s specifications” are un-enforceable. Proper operation of the equipment is better monitored through the use of the periodic monitoring approach prescribed in Paragraph VII(A)(3) of Attachment B.
Att A Condition V	These numeric emission limits are PTE calculations based on AP-42 emission factors. As the numbers indicate, the total emissions increase associated with the installation of the equipment was 13.98 tpy, which is less than the significance level of 25 tpy for particulate matter. Therefore, a PSD/NAA review would not have been required prior to installation of the equipment. This limit was also not derived from the PSSIP. As a review of Section 6 (Selected Control Strategies for the Paul Spur Area) of the PSSIP indicates, such a limit was never included as a control measure. Based on these considerations, these limits have not been carried over into Permit 1000044.
Att A Condition VI	This condition contains one-time requirements, and as such has not been carried over into Permit 1000044.
Att A Condition VII	Part II(A) of Attachment A
Att A Condition VIII	This condition in no longer applicable, and as such has not been carried over into Permit 1000044
Att A Condition IX	Please see discussion for Att A Condition V.
Installation Permit #1208	**Permit #1000044**

Condition 1	On-going testing requirements are in Paragraph VIII(B)(4) of Attachment B.
Condition 2	On-going monitoring requirements are in Paragraph VIII(B)(3) of Attachment B.
EPA Permit	**Permit #1000044**
Condition I	This is not an on-going requirement. This condition has not been carried over into Permit 1000044.
Condition II	Sub-Paragraph VIII(B)(2)(b) of Attachment B
Condition III	Section XII of Attachment A
Condition IV	Section IX of Attachment A
Condition V	Rules governing Permit Transfers are in AAC R18-2-325. These rules are applicable to the Permittee, even though they are not explicitly reproduced in Permit 1000044.
Condition VI	Section XXI of Attachment A
Condition VII	Part II(A) of Attachment A
Condition VIII	The emission limit has been placed in Sub-Paragraph VIII(B)(1)(d) of Attachment B. On-going testing requirements are in Paragraph VIII(B)(4) of Attachment B. The certification requirement in VIII(C) of the installation permit is a one-time requirement. Since it is not an on-going requirement, it has not been transferred over into Permit 1000044.
Installation Permit #1201	**Permit #1000044**
Att A Condition 1 - 4	These permit conditions are not on-going requirements. However, they establish the basis for installing and operating the Kiln 5 Dust Collection system. The operational and testing requirements have been reformulated in Paragraphs VI(B)(2) and VI(B)(4) of Attachment B.

VII. MONITORING AND RECORDKEEPING REQUIREMENTS

The following monitoring approaches have been prescribed in the permit :

A. Open Areas, Roadways/Streets, Material Handling, Storage Piles

Non-point sources are subject to the 40% opacity standard and other Article 6 requirements. Periodic monitoring for opacity standard entails a visible emissions survey in accordance with an ADEQ - approved observation plan, by a certified Method 9 observer. If the visible emissions survey indicates that a Method 9 reading may be required, the observer shall do so, and maintain records of the results. Any observed exceedance of the opacity standard should be reported appropriately. This approach, termed the Visible Emission Observation Procedure, is defined in Part I(D) of Attachment B. The requirement to conduct a bi-weekly Visible Emissions Observation Procedure is presented in Paragraph III(B)(1) of Attachment B.

Article 6 regulations also contain applicable requirements for non-point source emissions. These regulations require the Permittee to employ various control methods to suppress particulate emissions. Paragraph III(A)(2) of Attachment B lists the various methods of dust suppression that may be used. By <u>not restricting</u> the Permittee to use <u>only one</u> of the methods, the permit provides the flexibility required to facilitate employment of effective control measures. Periodic monitoring data for these applicable requirements is generated in two ways by this permit :

(i) the bi-weekly Visible Emissions Observation Procedure conducted as monitoring for the 40%

opacity standard will provide data that can be used to investigate the level of particulate emissions from non-point sources during a compliance timeframe.

(ii) Permittee is required to maintain a record of the kind of control measures that were employed to suppress particulate emissions. This periodic monitoring requirement is specified in Paragraph III(B)(2) of Attachment B of the permit. In recognition of the fact that this requirement may sometimes be highly paper-intensive and result in reduced flexibility of operations, the permit provides an alternative in Paragraph III(B)(3). Paragraph III(B)(3) states that the Permittee may maintain a Non-Point Source Monitoring Plan that serves as a record of the control measures that were employed by Permittee to mitigate dust emissions from non-point sources. To satisfy its function as a monitoring tool, the Non-Point Source Monitoring Plan should contain some minimum elements of information such as :

(1) Types of control measures employed on an activity-specific basis;
(2) Frequency of application of control measures;
(3) A system for logging variations from the strategy outlined in the Non-Pont Source Monitoring Plan

The Non-Point Source Monitoring Plan has to be submitted as part of the initial application, and will undergo public and EPA review along with the rest of the permit. If Permittee fails to submit the Non-Point Source Monitoring Plan along with the initial application, Permittee will be required to comply with the monitoring requirements of Paragraph III(B)(2), till such time that a significant revision is processed to allow the Permittee to avail of Paragraph III(B)(3). As part of the significant revision procedures, the Non-Point Source Monitoring Plan will undergo public and EPA review.

It should be noted that the Non-Point Source Monitoring Plan is a monitoring tool. The Permittee is required to use one of the methods outlined in Paragraph III(A)(2) of the permit, and to maintain a record of the method that was used. Additions to methods listed in the original Non-Point Source Monitoring Plan may or may not require prior approval, as discussed in the following :

If the new method is already listed in Paragraph III(A)(2), then prior approval from the Director is not required, as stated by Sub-Paragraph III(B)(3)(c). The Director will however, have to be notified of such changes. These notifications will have to be recorded in the Non-Point Source Monitoring Plan by Permittee, and will also be added to the copy of the Non-Point Source Monitoring Plan that is maintained at ADEQ.

If Permittee desires to use a method that is not on the list in Paragraph III(A)(2), prior approval for usage of this mechanism has to be obtained from the Director by relying on the appropriate permit revision mechanism. Once approval is granted, Permittee can initiate usage of the product, and record its usage in the Non-Point Source Monitoring Plan.

B. Kilns 4 and 5

Opacity is monitored by a Continuous Opacity Monitor (COM). One monitor has to be maintained on each stack. This requirement is in Sub-Paragraph V(B)(3)(a) and Sub-Paragraph VI(B)(3)(a) of Attachment B.

Kiln 4 and Kiln 5 are required to comply with a particulate emission standard. Proper maintenance and operation of the control device is key to meeting the standard. This permit requires Permittee to perform a stack test every year combined with monitoring stack gas opacity to fulfill the periodic monitoring requirements for particulate matter emissions. Although no data is available to directly correlate opacity

to particulate matter emissions, monitoring stack gas opacity would indicate potential problems with the air pollution control device. If corrective actions are taken to rectify the problems associated with the pollution control device, then compliance can be inferred on the basis that the source operates its pollution control equipment in a manner consistent with good air pollution control practices. An opacity of 20% was chosen as a baseline level of operations for Kiln 4, and a level of 10% was chosen for Kiln 5. The opacity limit is 40% for this source. Opacity above 20% (or 10%) but less than 40% does not hold the source in violation of either the opacity or the particulate matter standard, but merely requires the source to identify and alleviate the problem by taking corrective actions if necessary to reduce the opacity to less than 20% (or 10%). However, not initiating corrective actions, or not taking corrective action if problems with the pollution control equipment are found, could potentially hold the source in violation of the permit terms. Permittee is required to record the results of the investigation and the corrective actions taken, if any, and the date & time on which the action was taken. This approach is presented in Sub-Paragraph V(B)(3)(c), and Sub-Paragraph VI(B)(3)(c) of Attachment B.

C. Kiln 6

Kiln 6 is required to comply with opacity and particulate matter limits. Kiln 6 is controlled by a wet scrubber, and as such, an opacity monitor is not required pursuant to AAC R18-2-720(G). The monitoring approach, prescribed in Paragraph VIII(B)(3) relies on the use of scrubber pressure drop and water flowrate as indicators of scrubber performance. Devices to continuously record these parameters have been installed. Permittee is required to calibrate the devices on an annual basis. The water flow rate is required to be maintained above 90 gallons per minute. This number is based on performance tests.

D. Point Sources other than Kilns 4, 5, and 6

The Control Device Monitoring and Maintenance Procedure defined in Part I(C) of Attachment B is used as periodic monitoring for dust collectors. Proper maintenance of dust collectors is critical to ensure compliance with the particulate and opacity standards applicable to these point sources. Permittee is required to implement the maintenance program on a monthly basis. Permittee is also required to implement the Visible Emissions Observation Procedure defined in Part I(D) of Attachment B, once every two weeks.

E. Fugitive Emissions other than Open Areas, Roadways/Streets, Material Handling, Storage Piles

These emissions are subject to a 40% opacity standard. Monitoring for these emissions is via the Visible Emissions Procedure defined in Part I(D) of Attachment B, once every two weeks.

F. Housekeeping Plan

As required by the PSSIP, Permittee is required to implement a Housekeeping Plan to prevent accumulation of loose dust in the plant area. This Housekeeping Plan has been used by Permittee for the past few years, and has been included in the permit in Attachment D.

VIII. TESTING REQUIREMENTS

Annual performance tests for opacity and particulate matter are required at each of Kiln 4, Kiln 5, and Kiln 6 stacks. For Kiln 4 and Kiln 5, performance tests have to be conducted while combusting coal.

IX. ALTERNATE OPERATING SCENARIOS

Permittee proposed three alternate operating scenarios (AOS) for inclusion in the permit. Permittee provided descriptions of the AOS in a February 11, 2002 addendum to their application. The following paragraphs provide brief descriptions of these scenarios :

AOS - 1: Under AOS 1, quarry, crushing, and kiln operations will be suspended. All process equipment not in operation will be maintained in good operating order which will require periodic, temporary operation to perform maintenance. The maintenance will involve mechanical operation of the equipment without any process material.

The lime handling systems for Kilns 4, 5, and 6 will be used as transfer terminals under this AOS.

AOS - 2: Under this AOS, all daily operations at the quarry and lime plant will be in "Care and Maintenance" mode.

AOS - 3: In this scenario Permittee may operate one or more process areas.

The permit contains conditions for the AOS in Section IX of Attachment B. Each AOS is treated separately. For each AOS the permit contains : (i) A definition of the AOS, (ii) An identification of the operating status of various process equipment, (iii) A statement that all emission limits and standards remain effective, and (iv) A listing of all the monitoring, reporting, and recordkeeping requirements that the Permittee will have to comply with during an AOS and during transition into and out of an AOS.